Hott

UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,492	12/13/2001	Viktors Berstis	AUS920011012US1	6564

7590   05/16/2005

Robert H. Frantz
P.O. Box 23324
Oklahoma City, OK 73123

EXAMINER
PERUNGAVOOR, SATHYANARAYA V

ART UNIT	PAPER NUMBER
2625	

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/015,492 ✓	BERSTIS, VIKTORS
	Examiner	Art Unit	
	Sath V. Perungavoor	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *03 February 2005*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-19* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-19* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *03 February 2005* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

[1]   The response filed on February 03, 2005 has been entered and made of record.

Response to Arguments/Amendments

[2]   Applicant's arguments filed on February 03, 2005 have been fully considered. A response

to those arguments is provided below.

Drawings Objections

Summary of Arguments:

Applicant has placed the "Prior Art" legend on figures 3a and 3b; hence the objection should be

withdrawn.

Examiner's Response:

Agreed. Examiner thanks the applicant for resolving this issue and withdraws the objection.

Claim Objections

Summary of Arguments:

Applicant states that the renumbering of claims is improper.

Examiner's Response:

Examiner respectfully disagrees. According to practice claims need to be renumbered to

overcome the issue related to the missing claim.

35 USC § 102 Rejections

Summary of Arguments:

Item A: Claims have been amended to specify features not taught by Resnikoff.

Item B: Claimed uniformly spaced data samples array from non-uniformly spaced data set

would have the same density as the non-uniformly spaced data set.

Examiner's Response:

Item A: Applicant's arguments are moot in view of the new ground(s) of rejection.

Item B: Applicant's initial claims did not emphasize this limitation. Applicant's arguments are

moot in view of the new ground(s) of rejection.

35 USC § 103 Rejections

Summary of Arguments:

Tansley does not teach the use of a nonlinear polynomial schema for distribution or positioning

of sensors.

Examiner's Response:

Applicant's arguments are moot in view of the new ground(s) of rejection.

Claim Objections

[3]   The numbering of claims is not in accordance with 37 CFR 1.126 which requires the

original numbering of the claims to be preserved throughout the prosecution. When claims are

canceled, the remaining claims must not be renumbered. When new claims are presented, they

must be numbered consecutively beginning with the number next following the highest

numbered claims previously presented (whether entered or not).

- ▪ Misnumbered claims 16-20 has been renumbered 15-19.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

[4]   Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Resnikoff et

al. (hereinafter "Resnikoff") [US 4,574,311] in view of Balph [NPL document, "LFSR counters

implement binary polynomial generators"].

Regarding claim 1, Resnikoff discloses the following claim limitations:

A method of producing a two-dimensional sensor array for imaging,

comprising the steps of *[Figure 9b: Figure discloses a randomly placed sensor*

array according to the disclosed invention.]: determining a plurality of sensor

positions, each position having a spacing in a first axis from a datum point

according to a first non-uniform distribution schema, and each position having a

spacing in a second axis from said datum point according to a second non-

uniform distribution schema *[Column 5 Lines 45-49, Column 8 Lines 28-32:*

Cited reference discloses the Poisson disc process, which is a non-uniform

distribution schema. This schema is applied to two axes (x and y) to determine the

position of sensors for a datum point. Since, the values derived are for each axes

are independent of the other, this acts as two schemas.]; providing a two-

dimensional array of sensors, each sensor being positioned on said array

according to the determined positions in said first and second axes and *[Figure*

9b, Column 8 Lines 28-32]; providing a means for sampling said sensors such that

a two dimensional imaging sensor array having non-uniform sensor distribution is

realized *[Column 7 Lines 55-62].*

Resnikoff does not explicitly disclose the non-uniform schema being

"predictable deterministic".

However, in the same field of endeavor Balph discloses a non-uniform

predictable deterministic distribution schema *[Column 1 Paragraph 1, Column 2*

Paragraph 1: Cited reference discloses the use of linear feedback shift registers

to generate pseudorandom numbers, these numbers are predicatively determined

by the polynomial chosen.].

It would have been obvious to one with ordinary skill in the art at the time

of invention to modify the teachings of Resnikoff with Balph to utilize a non-

uniform predictable deterministic distribution schema for sensor placement. The

motivation being that linear feedback shift registers reduce the amount of logic

[Column 1 Paragraph 1].

Regarding claim 2, Resnikoff discloses the following claim limitations:

The method as set forth in Claim 1 wherein said first schema comprises a pseudo-

random schema *[Column 4 Lines 22-26].*

Regarding claim 3, Balph discloses the following claim limitations:

The method as set forth in claim 1 wherein said first schema comprises a

nonlinear polynomial schema *[Column 2 Paragraph 1]*.

Regarding claim 4, Balph discloses the following claim limitations:

The method as set forth in Claim 1 further comprising the step of assigning one or

more reference identifiers to said first and second non-uniform distribution

schema *[Figure 1: Disclosed polynomial X^4+X+1 acts reference identifier to the*

distribution schema. One can easily identify the type of distribution being used

from the polynomial notation.]

Regarding claim 5, Resnikoff discloses the following claim limitations:

The method as set forth in Claim 1 wherein said second schema comprises a

pseudo-random schema *[Column 4 Lines 22-26]*.

Regarding claim 6, Balph discloses the following claim limitations:

The method as set forth in claim 1 wherein said second schema comprises a

nonlinear polynomial schema *[Column 2 Paragraph 1]*.

Regarding claim 7, Resnikoff et al. discloses the following claim limitations:

The method as set forth in Claim 1 further comprising the steps of: creating a

dithered set of data samples by sampling said non-uniformly spaced sensors, said

dithered set of data samples representing an image; and *[Column 7 Lines 55-62:*

Cited reference discloses the sampling of non-uniformly spaced sensors, this

would produce the dithered set of data samples.]; performing interpolation to

synthesize a set of data samples representing uniformly spaced data samples from

said dithered set of data samples, said uniformly spaced data samples representing

said image according to uniformly distributed sensors *[Column 9 Lines 22-29,*

Column 11 Lines 3-5: Cited reference discloses interpolation being performed to

create an high resolution image array. This array would have to be uniform, since

it is being displayed on a monitor, which is known to have uniform horizontal and

vertical distributions.].

Regarding claim 8, Resnikoff et al. discloses the following claim limitations:

The method as set forth in Claim 7 wherein said step of performing interpolation

to synthesize a set of data samples representing uniformly spaced data samples

comprises performing linear interpolation *[Column 9 Lines 48-52]*.

Regarding claim 9, all claimed limitations are set forth and rejected as per discussion for

claims 1 and 7.

Regarding claim 10, all claimed limitations are set forth and rejected as per discussion for

claims 9 and 8.

Regarding claim 11, Resnikoff discloses the following claim limitations:

The computer readable medium as set forth in Claim 9 further comprising software for performing the step of receiving a reference identifier associated with distribution schema of said dithered data set, and wherein said software for performing interpolation comprises software for performing interpolation based upon said distribution schema *[Col. 9 Lines 30-68: Disclosed reference performs interpolation based on sensors distribution information.]*.

Regarding claim 12, all claimed limitations are set forth and rejected as per discussion for claims 1 and 7.

Regarding claim 13, all claimed limitations are set forth and rejected as per discussion for claims 12 and 2.

Regarding claim 14, all claimed limitations are set forth and rejected as per discussion for claims 12 and 3.

Regarding claim 15, all claimed limitations are set forth and rejected as per discussion for claims 12 and 5.

Regarding claim 16, all claimed limitations are set forth and rejected as per discussion for claims 12 and 6.

Regarding claim 17, all claimed limitations are set forth and rejected as per discussion for claims 12 and 7.

Regarding claim 18, all claimed limitations are set forth and rejected as per discussion for claims 12 and 8.

Regarding claim 19, all claimed limitations are set forth and rejected as per discussion for claims 12 and 11.

Conclusion

[5]   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

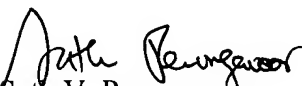policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Contact Information

[6]   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Mr. Sath V. Perungavoor whose telephone number is (571) 272-

7455. The examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Mr. Bhavesh Mehta whose telephone number is (571) 272-7453, can be reached on

Monday to Friday from 9:00am to 5:00pm. The fax phone number for the organization where

this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sath V. Perungavoor
Art Unit 2625
April 21, 2005

MEHRDAD DASTOURI
PRIMARY EXAMINER